Sept. 23, 1952 E. T. COUNTS ET AL 2,611,334

BURGLAR ALARM

Filed Oct. 10, 1950

Fig. 1

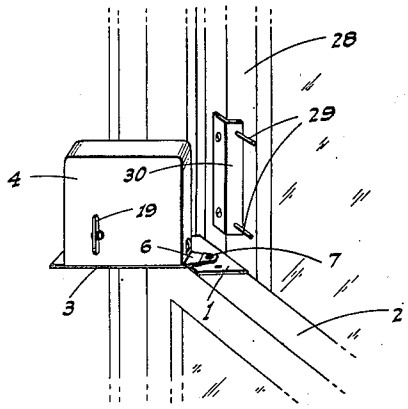


Fig. 2

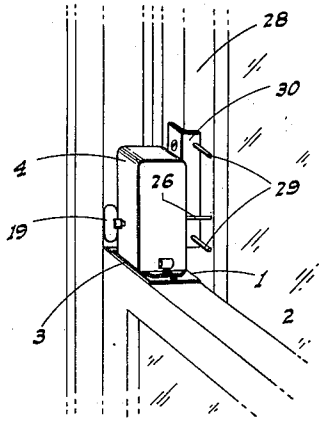


Fig. 3

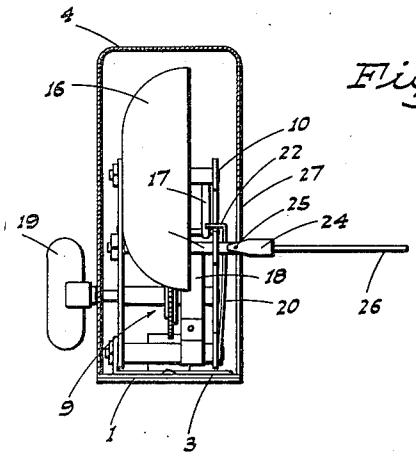


Fig. 4

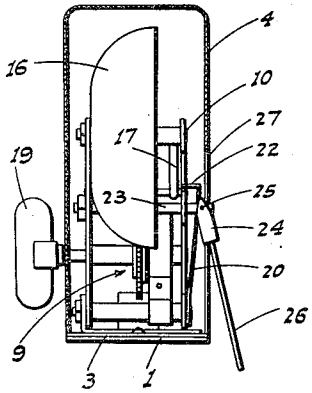


Fig. 5

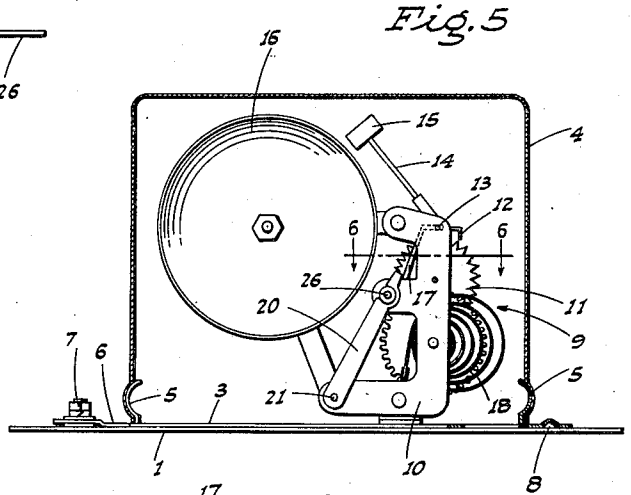
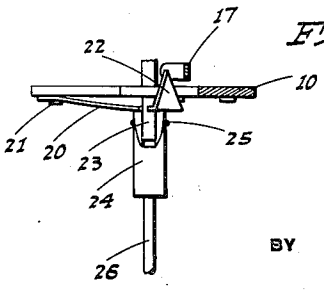


Fig. 6



INVENTORS

Everett T. Counts

Harold Breitenbucher

BY

ATTORNEYS

Patented Sept. 23, 1952 2,611,334

UNITED STATES PATENT OFFICE

2,611,334

BURGLAR ALARM

Everett T. Counts, Stockton, and Harold Breitenbucher, Oakland, Calif.

Application October 10, 1950, Serial No. 189,344

3 Claims. (Cl. 116—91)

1

This invention is directed to, and it is an object to provide, a novel burglar alarm; the device, while especially designed for windows, is not limited to such use.

Another object of the invention is to provide a burglar alarm which is of relatively simple structure but very effective in operation to sound an audible warning if an atempt be made to open the window.

A further object of the invention is to provide a burglar alarm which includes a spring actuated escapement mechanism arranged to ring a bell, and there being a novel window-motion actuated trigger normally locking such mechanism against operation.

An additional object is to provide a burglar alarm wherein the main portion of the device is mounted, in novel manner, for easy manual swinging from inwardly of the window, between a working and non-working position whereby when the device is in said latter position, the window may be opened or closed without the alarm functioning.

It is also an object of the invention to provide a burglar alarm which is designed for ease and economy of manufacture.

Still another object of the invention is to provide a practical and reliable burglar alarm, and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects are accomplished by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings:

Fig. 1 is a perspective view showing the device as swung to its non-working position.

Fig. 2 is a similar view, but shows the device in working position.

Fig. 3 is an end view of the device; the case being in section and the control trigger shown in its set position.

Fig. 4 is a similar view, but shows the control trigger as released by window motion.

Fig. 5 is a front elevation of the device, with the case in section.

Fig. 6 is a fragmentary cross section on line 6—6 of Fig. 5.

Referring now more particularly to the characters of reference on the drawings, the device comprises a horizontal base plate 1 adapted to be secured on top of the lower sash 2 at one corner thereof.

The numeral 3 indicates the bottom plate of an upstanding case 4; the latter being secured to said bottom plate 3, at opposite ends, by snap

2

locks 5. At one end the bottom plate 3 projects, as a tongue 6, beyond the case 4, and said tongue is pivoted, as at 7, to the base plate 1 for swinging of the bottom plate 3 and consequently the case 4 from a non-working position projecting inwardly from the window, as in Fig. 1, to a working position parallel to the base plate 1, as in Fig. 2. When the bottom plate 3 is in working position, as in Fig. 2, it is frictionally held in place by a detent 8.

Within the case 4 the bottom plate 3 supports a spring actuated escapement mechanism, indicated generally at 9, which mechanism includes an upstanding frame 10, an escapement wheel 11, and a pawl 12, whose pivot is indicated at 13. A striker arm 14 is fixed in connection with the pawl 12 for oscillation about pivot 13; said striker arm including a striker head 15 positioned to engage a bell 16 supported from the frame 10.

A depending finger 17 is fixed in connection with the pawl 12 and striker arm 14 whereby to likewise oscillate about the pivot 13.

The depending finger 17 is normally locked against swinging motion, in the manner as will hereinafter appear, and thus the device is normally out of operation.

However, upon release of the depending finger 17, the escapement mechanism 9 functions, and the striker head 15 recurringly strikes and rings the bell 16.

The spring actuated escapement mechanism 9 is adapted to have the spring 18 thereof wound by a winding knob 19 accessible exteriorly of the case 4.

An elongated upstanding leaf spring 20 is fixed at its lower end, as at 21, to the frame 10, and at its upper end such spring includes a laterally inwardly projecting tip 22, which—under the normal influence of the spring 20—is retracted clear of the depending finger 17; the spring tending to swing out. However, such tip 22 is normally maintained in the oscillatory path of the finger 17, preventing operation of the escapement mechanism 9, as follows:

A cross rod 23 projects outwardly from the frame 10 through the leaf spring 20 adjacent but short of its upper end, and a fork-like, two-way cam 24 straddles the rod 23 outwardly of the spring 20; the cam being pivoted to said rod as at 25. The cam 24 is tapered top and bottom, but when in axial alinement with the rod 23, urges the leaf spring 20 inwardly a distance such that the tip 22 projects into the oscillatory path of the depending finger 17 (see Fig. 3). However, upon swinging of the cam 24 either upwardly or downwardly from a position axially alined with

the rod **23** (see Fig. 4), the high point of the cam is no longer effective, and the spring **20** retracts the tip **22** out of the path of the finger **22**; whereupon the escapement mechanism **9** causes the striker head **15** to ring the bell **16**.

When the device is in its operative position, as in Fig. 2, with the cam **24** in its normal set position, the trigger **26** projects into the path of the upper sash **24** intermediate a pair of vertically spaced trip pins **29** secured to said upper sash by a bracket **30**. The bracket **30** is secured to the upper sash **28** at a point whereby the trigger **26** occupies the foregoing position when either one or the other sash is in an open position for ventilation.

Thereafter, if any unauthorized attempt be made to open either window sash from the outside, one or the other of the trip pins **29** will engage the trigger **26** and swing it either up or down, correspondingly moving the cam **24** and permitting the leaf spring **20** and tip **22** to retract, whereupon the alarm functions.

In this manner a very effective burglar alarm is provided; the device while being simple in its structure is nevertheless quite practical and reliable.

The lower pin **29** provides an added safety feature, as it is above the trigger **26** when both sashes are closed, and may thus prevent any appreciable opening of the sashes without an alarm being given. Also, when the trigger is disposed between the pins **29**, the alarm will be given with any appreciable closing movement of either sash, such as might be accidentally imparted to one sash or the other by an intended intruder.

From the foregoing description it will be readily seen that there has been produced such a device as substantially fulfills the objects of the invention, as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described the invention, the following is claimed as new and useful, and upon which Letters Patent is desired:

1. In a burglar alarm which includes an alarm device on one relatively movable part of a window or the like, the alarm device having a trigger projecting therefrom, and a trigger trip on the other part in the path of said trigger; an alarm mechanism in said device including an element tending to oscillate, a leaf spring having a lateral tip, means mounting the leaf spring at the end opposite the tip for lateral motion between a first position with the tip clear of said element and a second position with the spring loaded and the tip in the path of and blocking said element, a fixed rod projecting outward adjacent the leaf spring intermediate its ends, a cam pivoted on the rod having a set position holding the spring in said second position and a released position with the spring in said first position, the trigger projecting from the cam in a manner to release the latter upon engagement by the trip.

2. A sash-window burglar alarm comprising an alarm unit mounted on top of the inner sash adjacent one side thereof, the unit including a releasable trigger projecting therefrom at right angles to said sash toward the outer sash to one side of and normally overlapping the adjacent side rail of the outer sash, the trigger including an outer portion adapted to swing up or down to a substantially vertical position from a normal horizontal position, means between the unit and trigger to cause actuation of the alarm upon said outer portion being tripped from its horizontal position, and a rigid trip pin mounted on said side rail of the outer sash and extending parallel to the sash in the path of movement of the trigger when the outer portion of the latter is extended; the trigger being clear of said path in a horizontal position.

3. An alarm as in claim 2, with a housing in which the alarm unit is mounted, and means mounting the housing on the inner sash for horizontal inward swinging movement from a predetermined normal operating position whereby to allow of relative vertical movement of the sashes when the trigger is extended.

EVERETT T. COUNTS.
HAROLD BREITENBUCHER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
298,137	Vassar	May 6, 1884
1,068,342	Hudspeth	July 22, 1913
2,443,553	Cadenhead	June 15, 1948